

CLAIMS

What is claimed is:

1 1. A handheld device for taking an image of an object comprising:
2 a camera module capable of focusing on and generating an electronic image signal
3 corresponding to an image of the object;
4 a motion sensor for sensing movement of said camera module and for generating a
5 movement signal indicative of the movement of said camera module; and
6 a transmitting means for transmitting the electronic image signal and the movement
7 signal to a processing engine.

2 2. The handheld device of claim 1, further comprising a processing engine
3 receiving the electronic image signal and the movement signal from the transmitting means,
4 and for processing the electronic image signal in response to the movement signal to correct
5 the image signal for movement of said camera module, and for combining a plurality of
6 corrected image signals into an electronic image output signal corresponding to a single image
7 of the object.

1 3. The handheld device of claim 1, wherein said motion sensor is capable of
2 detecting movement of said camera module in at least two dimensions.

1 4. The handheld device of claim 3, wherein said motion sensor is capable of
2 detecting movement of said camera module in three dimensions.

1 5. The handheld device of claim 4, wherein said motion sensor comprises a
2 accelerometer.

1 6. The handheld device of claim 4, wherein said motion sensor comprises a
2 gyroscope.

1 7. The handheld device of claim 2, wherein said motion sensor is capable of
2 detecting movement of said camera module in three dimensions.

1 8. The handheld device of claim 2, further comprising a memory for storing a
2 plurality of electronic image signals corresponding to a plurality of images of the object.

1 9. The handheld device of claim 2, wherein said processing engine is capable of
2 combining a plurality of corrected image signals corresponding to a plurality of images taken
3 of different portions of the object.

1 10. The handheld device of claim 2, wherein said processing engine is capable of
2 combining a plurality of corrected image signals corresponding to a plurality of images taken
3 of the object to result in a signal capable of producing an image of a higher quality than any of
4 the single images.

1 11. The handheld device of claim 2, wherein said handheld device is a mobile
2 phone.

1 12. The handheld device of claim 1 in combination with a processing engine located
2 remotely from the handheld device, said processing engine receiving the electronic image
3 signal and the movement signal from the transmitting means, and for processing the electronic
4 image signal in response to the movement signal to correct the image signal for movement of
5 said camera module, and for combining a plurality of corrected image signals into an electronic
6 image output signal corresponding to a single image of the object.

1 13. The handheld device of claim 12, wherein said handheld device is a mobile
2 phone.

14. A method for obtaining an image of an object with a handheld device containing
a camera module and a motion sensor, said method comprising:

taking a plurality of images of the object with the camera module to generate an
electronic image signal corresponding to each of the plurality of images taken;

storing the plurality of electronic image signals;

sensing movement of the camera module between the taking with the camera module of
the plurality of images of the object;

generating a plurality of movement signals which are indicative of sensed movement of
the camera module;

processing each of the plurality of electronic image signals in response to the movement
signals to correct for movement of the camera module to generate a plurality of corrected
electronic image signals; and

13 combining the plurality of corrected electronic image signals into an electronic output
14 signal corresponding to a single image of the object.

1 15. The method of claim 14, wherein movement of the camera module in at least
2 two dimensions is sensed.

1 16. The method of claim 15, wherein movement of the camera module in three
2 dimensions is sensed.

1 17. The method of claim 14, wherein storing the plurality of electronic image
2 signals, processing each of the plurality of electronic image signals, and combining the
3 plurality of corrected electronic image signals is performed by the handheld device.

4 18. The method of claim 17, wherein the handheld device is a mobile phone.

1 19. The method of claim 14, wherein storing the plurality of electronic image
2 signals, processing each of the plurality of electronic image signals, and combining the
3 plurality of corrected electronic image signals is performed by a processor remote from the
4 handheld device.

1 20. The method of claim 14, wherein in said combining step, a plurality of corrected
2 image signals corresponding to a plurality of images taken of different portions of the object
3 are combined.

1 21. The method of claim 14, wherein in said combining step, a plurality of corrected
2 image signals corresponding to a plurality of images taken of the object are combined to result
3 in a signal capable of producing an image of a higher quality than any of the single images.

1 22. The method of claim 14, further comprising displaying on a display of the
2 handheld device an image in response to the electronic image output signal.

1 23. The method of claim 14, further comprising transmitting the electronic image
2 output signal to a display remote from the handheld device and displaying on the display an
3 image in response to the electronic image output signal.